kept a manager and his family in the bungalow of each plantation, and a staff of eight or nine tappers. Once a week we drove out there on a picnic inspection; my father and mother gazed with pride on the rows of neat trees, walked right round to see that clearings were maintained and that the trees looked right, peered into the cups of rich white latex, administered rebukes and instructions and inspected the books, visited the smoking house and saw the brown smoked sheets with GK stamped on them, after the traditional Burmese way of married business—G for Gyi, my mother, and K for Kaing, my father—and then we all returned home. Chinese traders came to the house and while chewing betel they talked about quantities and prices of the stock we had. Then the stacked sheets came from the plantation in the two bullock carts which we kept there, and the traders came and took them away and paid us in cash. Business was something so foreign to what we had always seen our parents doing, and this all seemed so simple, that we always felt they were surely being cheated.

Some of the other pensioners did not believe in dabbling with commodities that depended on a world market. Even the way in which we grew rubber went too much into the world of specialized commerce which might have pitfalls for a retired civil servant. A friend of my father's grew large gardens of *da-nyin*, a tree of the laburnum species. The fruit of this tree rivals the durian for its nauseating effect on foreign sensibilities. It does not exude a smell as the durian does, until you eat it, but after eating it the smell comes out in breath, sweat and all other excretions. But it is one of our favourite foods. It is a small flat circular fruit of a hard and smooth consistency, enclosed in a shell which prises open in neat halves like an oyster shell. The texture and taste are delicious. We boil or bake it as a vegetable for fish sauce, we salt it in big jars as a pickle, we beat it and make it swim in coconut milk and eat it as a sweet, we bury it and make it sprout into a more pungent form called *da-nyin wet*. The main point is that it is eaten in vast quantities. It also contains substances which are good for diabetics, and families buy it literally in hundreds. No world depression interferes with the demand for *da-nyin thi*, and though the sale price is low, overhead charges are almost nil.

Other families in Thaton got their extra income from paddy-land. Although the rice for which Burma is so famous today did not enter world markets till the latter half of the last century, the possession of *lè*, fields, which is synonymous with paddy-fields, is a well established form of wealth. Our part of Burma is particularly rich in fields. Nearly all the 3,500,000 tons of rice which is exported annually from Burma comes from Lower Burma, where Tenasserim Division ranks among the

three most productive areas, and Thaton district takes first place in Tenasserim. But rice is more than the chief export crop of the country to us. It is our *wun-sa*, food for the womb, our staple food; and we have depended so much on it that we pay it reverence, almost. When we were young, A-Kyi and our nurses never allowed us to treat on any rice that had been spilt; rice was like a master and human beings its servants, they said. The phrase for "I was not born yesterday" is "I grew up eating rice", and in the same way excessive stupidity excites wonder that the person nourished on rice can be so stupid. Through years of journeying on trains, bullock carts, and river steamers, we have seen the peaceful green fields, the dry reaped corn, the golden grain heaped on small canoes before milling. Though we did not know the toil and the uncertain hopes of the cultivators, we followed the growth of the life-giving grain through all its stages, seeing the first sproutings in one place in one year, the ripe and mature crop in another, and the thriving young stalks of a later generation in another place and time.

Our fields seemed perpetually marked into small beds by ridges six inches high. Lying empty during the first months of the year, these beds grew parched and baked by April and May. With the first blessed showers of the monsoon about mid-May, however, one, two, three, four or more inches of rain fell on the beds within about ten days, and softened the hard crust. Men went to work about the end of the month, and with harrow and plough they chopped and churned up the earth, cutting and burying weeds, refining the rough, and making the stiff clay soil pliant until a soft fine mud was produced. In the meantime, the seeds had been soaked in water in deep layers between banana leaves, to make them sprout and become more receptive of the soil's richness. These were brought out in baskets, and young men and women wearing wide bamboo hats in the heavy showers, walked about scattering them, using up to ten basketfuls in one acre. They allowed the seeds to lie for a few

243 days and then let in a gentle amount of water to flood the beds—one or two inches now, and more and more as the plants grew taller. In the meantime, vast stretches of beds were being prepared in the same way—plough and harrow and chop the weeds which here had become bigger and rougher with the rains, but would feed the soil better for that reason. When they had finished, all the country-side along the railway line looked like a vast segmented mirror, all the fine mud of the field lying beneath the four inches of water, and not a green weed to be seen. By now the plants in the nursery beds were about 1½—2 feet tall, and it was mid-July. Men plucked the seedlings, tying them swiftly into bundles of about 750. They chopped off the heads to free the plant of leaves which might make the young stalks topple over when they were planted upright. Then men and women stood ankle deep in the main beds and with one deft stroke of the right-hand they planted two or four stalks straight into the soft mud, each group a few inches from the next. It was this long and laborious task which gave the Lower Burman his landscape of endless green fields of rich waving paddy. From now on, these fields had only to be tended with water, neither to be stagnant, flooded, nor too dry. Through the months of September and October the rains diminished, the soil grew drier and the corn ripened from green to yellow. In December it was cut, tied in bundles and sunned for further drying and carried to the threshing floor. Here the bundles were ranged in rows with ears turned inwards, on the hardened surface of mud and dung, and bullocks trod round and round on them, slow and confident that their heavy hoofs would crush the chaff and leave the hard grain whole; and lo! when the mixture of corn and chaff was handed up in baskets to a high platform and tumbled down in a strong wind, the wind blew the chaff and dust away, but the corn fell in a clean heap on the ground below. Thus cultivators, and the weeds, earth, rain, sun, oxen and wind produced our wun-sa; but alas, the bounding broadcast sower, the slim, red-skirted deft-handed transplanters and the loving water-layers of this description are too often merely tenants or hired workers on the land. Owing to various causes, about 48% of the
423 land in Lower Burma belongs to non-agriculturists, chiefly non-resident, and although the money-lending alien and Indian Chettiar had become the chief holders of such lands, the owners of fields among our friends were also absentee landlords in the fullest sense, having little connection with the working of the paddy, except as a source of income.

452 Some of the pensioners got a fat income from money-lending although they would not have liked to admit it. Burmans who need money do not borrow from banks, nor do they have dealings with banks as a rule. It is only in this generation that such a thing as a bank balance is

2:Scott G-5 (1870's-1909)1910 AP1 Burma
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CHAPTER XXIII

RICE CULTIVATION

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A GROWING number of millions of acres are under cultivation in Lower Burma, and of this total all but some three hundred thousand acres are devoted to the planting of rice. Tobacco, sugar-cane, cotton, and oil-seeds of different kinds, as well as fruit-trees, form the other crops. Upper Burma has a greater number of crops, and the proportion of rice is far from being so overwhelming, though almost everywhere it is the chief crop. The alluvial lands of the Irrawaddy delta produce by far the greatest quantity of rice. It is certain that the best quality grain comes at present from this part of the country, but this may be due to more practised agricultural skill or long-continued tilling of the land. Hardly any possible number of crops in a season could apparently exhaust the fertility of the soil. Any part of the country, however, may be used for the cultivation of rice. The laziest farm is a swamp-land, where the ordinary rainfall is sufficient to produce the sodden ground requisite for a rice crop. Such low-lying plains and the riparian lands, annually flooded by the overflow of the river, are naturally best suited to Burmese indolence and are earliest taken up. Farther up the country, where the rain runs off the surface quickly and the land is too high for the south-west monsoon floods, it is necessary to resort to irrigation, either by the obvious method of dams or by ingenious water-wheels. Finally, there is the laborious taung-ya cultivation, where whole hillsides are cleared of trees to produce a crop. This hard work is left to mild aboriginal or other tribes, whom the Burman has long ago bullied out of the fat lowlands.

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● 243 Malicious people have declared that the only things a Burman does well are steering a boat and driving a bullock-cart. This is a libel; he can cultivate rice remarkably well. Unfortunately, however, as far as a vindication of his character as a worker is concerned, this does not imply any severe labour. Here the Burman is a victim of circumstances. So rich is the soil of his native land that it has only to be scratched to burst with plenty; the ploughing of the land cannot be described in any other way. The south-west monsoon rains, commencing early in June, soon reduce the ground to a soft sea of mud. When this has come about, the Burman proceeds to plough it. His plough is a single-barred harrow, or rake, with three long teeth of tough acacia-wood; a high bow or loop of bent wood rises from the cross-bar, and standing on this, the farmer is dragged backwards and forwards till the ground is reduced to a smooth surface—no very difficult matter. Oxen are frequently used, but more commonly the mud-loving buffalo, partly because he regards the toil as a pleasure on account of the mud, and partly because of his greater strength. Lazier farmers still adopt the primitive method of making the children drive the buffaloes and plough-oxen up and down in the mud and water so as to poach it up well; and then a log of wood is drawn over it to smooth it down. None of the farms are large, the average being somewhere between ten and twenty acres; so that this work is soon over. Nurseries are prepared at the same time on somewhat higher ground, where the seed will not rot with excessive moisture, and here the grain is sown broadcast.

Agricultural operations are now suspended for a month or six weeks. By about the beginning of August the ploughed fields have become somewhat less fluid, and the plants in the nursery, called pyokyèlè, have grown to a fair size. These are then pulled up and carried off to the prepared lands. A kaukseiktan, or knobbed stick, is used to make holes in the ground at intervals of a few inches, and into each of these holes a couple of plants are inserted. This work is left to the women and children, many of whom prefer their hands to the stick. The farmer squats on one of the solid ridges, which intersect the ground and serve as

2:Scott G-5 (1870's-1909)1910 AP1 Burma
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footpaths, and with a huge green cheroot in his mouth, leisurely contemplates the operation. Everything is now in the hands of nature, and the agriculturist may lounge round his farm in peace till November; unless, indeed, excessive rain floods the ground and rots the crop, when a new planting out has to be gone through. The harvesting near Rangoon is entirely done by men from Upper Burma, or even by Indian coolies. They work for very little, and it saves the farmer a good deal of time and dignity to get all the cutting done for him. Accordingly, from October till December the steamers down the Irrawaddy used to be crowded with King Thibaw's subjects, all of whom had to leave behind them with their Myo-sa, or his delegate the Myo-wun, who vicariously "ate" the township between them, a pledge either of property or of some member of their family, that they would return to their country again. When they got back, very little of their hard-earned gains escaped the voracity of the royal officials. Now they come down by train, and after a trip or two learn enough to keep their money from enterprising fellow-countrymen. These anyathas, as they are called, behave remarkably well in British territory, notwithstanding the assertions of the rural police, who, being unable to detect dacoits, declare that these are all Upper Burmans who have come down for the harvest. They are really, however, mostly simple, quiet people, who are kept very much in awe by the bluster and town-knowledge of the down-country farmers, and work away zealously with their queer sickles, looking like the ordinary English article worn to half its original size by long use. It is worthy of notice that the grain is not mown close to the ground as in Europe. Except where there is a market for straw, very little more than the ears are cut off, and the straw burnt in the hot weather of March and April supplies a scarcely-needed fertilising to the soil. The reapers usually receive their payment from the farmer in grain, but they naturally convert this into money, or more portable goods, before they start off home again.

It does not take long to cut the crop, and then the corn is brought in to the homestead, commonly on rude sledges, more seldom in carts. The threshing-floor does not take

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243 much preparing. It is simply a portion of the field swept clean. It is sufficiently hard from the broiling sun, and a stake is driven into the centre of the circle. Two lines of sheaves are arranged round this, head to head, and the grain is trodden out by slow-moving bullocks in good old lazy fashion. The Christian Biblical precept, not to muzzle the ox that treadeth out the corn, does not fail of observance with the Buddhist farmer. Then the paddy, that is, the unhusked grain, is winnowed. In some places hand-winnowing machines of a simple pattern are used; but ordinarily a far more primitive and easy method, corresponding to the substitution of oxen for threshing-flails, is in use. A man stands on an elevated platform and capsizes baskets of paddy brought from the threshing-floor; the rice falls on a sloping bamboo mat and so to the ground, the wind blowing away a great part of the bits of broken straw, chaff, and light grain. The system may not be very thorough, but it saves an immense amount of trouble, which is the chief consideration. All that now remains to be done is to carry the grain off to the big rice-boat lying in the creek. There it is stowed in bulk; and after a day or two, the farmer makes a start, dropping leisurely down through the network of creeks into one of the main streams, and so making his way to Rangoon, or Bassein, whence he will return in a few weeks with fine Chinese neckerchiefs for his daughters and perhaps a gay Manchester paso or two for himself and his sons—unless, indeed, the Madras money-lender has snapped up all his receipts down in town, or some of the robber-boats that infest the creeks at this time of the year have pounced upon him and carried off everything but the boat and the paddles.

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243 427 433 435 Rice-farming would be profitable as well as easy work were it not for the reckless squandering of almost all the cultivators. The average rent per acre is under three shillings; the average produce of the land per acre is from eighty to a hundred bushels in the more fertile parts, while elsewhere the yield is from forty to fifty. The selling price of rice per maund (80 lbs.) in Rangoon is between 4s. 6d. and 5s. Agriculturists, therefore, ought to grow rich. But they are too fond of gambling and building works of merit

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to accumulate money, and their carelessness results in the constant death of their plough-beasts, so that matters usually remain exactly at the same level if the farmer does not actually get into permanent debt. The Scottish Highlanders have a pious wish, "May the free hand always be full!" If it is not always full in Burma it is consoling to think that it is seldom absolutely empty. Still, when the grandson succeeds he ordinarily finds that there is as little actual money hoarded up about the place as there was when the grandfather Po Gyi spent so many borrowed rupees at his uncle's funeral.

If rice cultivation is easy work in the low country, it is very different with the taung-ya, or hill clearings. Here the dense underwood and forest growth has to be cut down; and the more there is to cut the better the crop, for the soil needs fertilising badly, and all that is cut down is burned. Work is begun about January; everything is felled, bushes and all; and after the fallen logs have dried some time in the sun, the brushwood is heaped up round about them and the whole is set on fire. Some of the logs smoulder for weeks —perhaps till the first rains come. Then the ground is rudely dug up with hoes, and the ashes turned in. Cotton-seed is ordinarily mixed with the rice, which is of a quite different variety from that produced in the plains. It is sown broadcast, and the farmer has thereafter only to keep down the weeds, but this is not by any means a light task. The crop is ready by October, and furnishes little more than enough to support the family or community. The scanty manure provided by the wood-ashes is not sufficient to last more than two or three years; and when the crop is secured the party proceeds on to a new settlement, there to repeat the same laborious process. A very ingenious device for lightening the toil is resorted to where there is much heavy timber. Beginning at the bottom, they slightly cut the lowest trees on the upper side only, gradually increasing the depth of the notch as they advance up the hill, until at the top of the clearing they cut the trees completely through. These fall on the row immediately below them, and by their weight knock it down; and so the felling process is continued down to the bottom. Occasionally a tangle occurs

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where some sturdy tree refuses to fall, and the clearing it away becomes a matter of very considerable danger. This taung-ya system is very wasteful as well as laborious, and annually draws down upon itself the denunciations of the English forest officers. But the hill-tribes who adopt it are too few to support themselves in any other way. They were long ago driven out of the plains by the Burmans, and now cling to their old nomadic life with a degree of obstinacy which Government officials, in a variety of ways, have found is not to be tempted by any tale of the present security and plenty of the low country, or even of the valleys among the hills. Rice, therefore, continues to be produced with the minimum and the maximum of labour; but none of the hill rice ever finds its way out of the country, and seldom even down to the plains.

The rice season, as far as the English merchant is concerned, commences in January and ends about May; but though this is pre-eminently the "busy season," there are purchases made in greater or less quantities all the year round. The relations between the great English rice firms and the simple jungle cultivators have not always been of a very elevating character, and it can hardly be denied that the fault lies wholly at the door of the foreigner. Missionaries in Burma are wont to mourn that their teachings are often rendered wholly nugatory by the want of scruple, and it might almost be said of honour, displayed by the great Rangoon rice firms. The good padres teach their proselytes that Christians are all honest and truthful. The ingenuous lads enter as clerks in a rice-mill and discover that Englishmen scarcely differ from the "poor heathen," except in being more lordly in the way of doing the thing.

Years ago, when there were not nearly so many mills as there are now, and not a quarter so many ships in the harbour during the rice season, things went on pretty equably. One day one firm would give a rupee or so more per hundred baskets, and the next day it would be another. But soon the mills began to increase in number and more ships came, and it was harder to get paddy. Then rival firms began to bid against each other. There was demurrage before their eyes, and it was terribly expensive work keeping the mill

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establishment up to its full strength. And so prices rose and rose until they became absurdly high, and no one profited but the hawks that preyed on the simple Burmese cultivators. Then the English merchants held a meeting, and all pledged themselves not to give more than the current market rate for paddy. This seemed a fair enough agreement; but after a while it was found that the boats all gravitated towards one or two firms. A little investigation showed that this was due to the fact that though they paid the ordinary rate, according to the compact, they had a smaller measuring basket than their neighbours. Accordingly every one went on reducing the size of his basket until the system became as ruinously absurd as ever it had been before. Then there was another meeting, at which it was unanimously agreed that this state of affairs would never do, and that it was absolutely necessary to come to some definite understanding. A committee was appointed which, after some deliberation, concluded that, if, in addition to abiding by the market rate, every one were bound to use a basket of a certain fixed size, there would be no chance for unfair speculations. A standard basket was therefore fixed upon; and the competitors were supposed to start fair again. But in no very long time, one firm put a false bottom in the basket, another wedged in a board; and so on, till matters got back to the old way. This state of affairs is hardly creditable to mercantile honour, and it certainly is by no means profitable.

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Independently of this, paddy has gone up in price at an alarming rate of late years. The first heavy rise was in 1877, at the time of the Madras famine. That was also the time of the resolution to have a standard basket. Rice was wanted in any quantity for the famine districts, and millers gave an altogether fabulous price for grain. The game went on merrily, introduced the scandalous "paddy morality," and lasted long enough to make the cultivators think the new prices had come in for good. Far too many Burmese farmers are heavily in debt to the "chetties," the money-lending caste of the Madras coast. The agriculturists have borrowed money to build a pagoda or a monastery; to give a grand feast on the

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occasion of their marriage, or their father's death; to buy a new yoke of oxen in the place of those that have been carried off by disease; to get seed-grain to sow their tracts of paddy land, the last season's gains having been lost in some gambling transaction when they were down in Rangoon. They have got into the chetty's books in some way at any rate; and hapless is the man, Burman or Englishman, who has dealings with the fat, shaven-headed Madras money-lender. He will be charged eight, ten, twelve per cent a month, or even more, before there is an end of the transaction. The chetties, therefore, took a particular interest in the rise of the price of paddy. High prices ensured their being paid; moreover, handling such unwonted sums of money made the ever-careless Burman reckless. He gambled, he gave great feasts, he got deeper and deeper into debt with the money-lenders. Consequently it was desirable that the prices should not go down; and as men of business the chetties understood how that was to be done; they made the Burman farmers hold back their grain. The Rangoon firms were in desperation to meet their contracts, the ships could not be kept waiting; and so prices were maintained at nearly famine rates. This more than anything else brought about the unlucky legerdemain with standard baskets. The appearance of the chetty element in the trade upset everything. They are charming men of business, and know all about bulling and bearing, and all the other civilised expedients of trade. Poor "Jack Burma," listless and good-natured as he is, would never have thought of such things of himself; but he is in the hands of his master. Not a single village in the jungle, however remote, is to be found without its bare-backed money-lender. He hovers round the paddy nursery; he watches the men planting out the handfuls of half-grown rice; he makes the farmer hold back the threshed-out grain till he gives the word: then he fixes the rate and all but takes the money himself.

The English merchants have struggled against the system, but with small success. They have laid out heavy sums in advances. The farmer is paid for the next year's crop before ever it is sown. This is generally only practi-

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cable with men who have not yet fallen into the clutches of the chetties, and the result has been almost invariably to drive them into the money-lender's arms. The Burmese, it it is to be feared, have not sufficient stability of character. U Myaing or Maung Po never had so much money before in their lives as the advances figure to. They do not know the value of it, and proceed to squander the rupees forthwith; and so, long before the paddy is delivered they are heavily in the usurer's books, and then Maung Po and U Myaing have to do as they are bidden. Moreover, the system in any case could hardly be a safe one. The cultivator might die; there might be a flood or a jungle fire; many things might happen, in fact, to prevent the advance boats from ever reaching the Puzundaung creek. Consequently many English firms have given up the practice, and instead send agents away up the creeks, far into the jungle, to negotiate with the farmers on the spot and try to secure paddy before rivalry has had time to raise the price. But even this expedient does not answer well. The chetties do their best to throw obstacles in the way. It is not without expense, and it impresses the cultivators with a notion of the great demand there is for paddy.

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The telegraph, they say, ruins business. The paddy season opens in February with a price of, say between seventy and eighty rupees a hundred baskets. The merchants declare they will not be forced into materially increasing this rate, and the home firms charter a number of ships. Meanwhile the price of paddy steadily rises, while rice in England steadily goes down; and by the time the vessels discharge their cargo in Liverpool or London, milled rice is not very much dearer in wholesale shops than the raw paddy in the Burmese boats. New mills are constantly being started—which would seem contradictory, were it not that all the firms starting them have business of another kind; teak sawmills, cotton or piece-goods trade, silks for Burmese men and maidens, or jute and grey shirtings for Upper Burma and the hill tribes. Rice will certainly always be wanted, and there is any quantity of it to be had in Burma. A little more of the sterling probity which used to be associated with the name of the English merchant would

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243 do no harm in Rangoon rice dealings, and would win that
452 respect from the farmer which heavy payments and cunning
435 never will.

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243 Rangoon still continues to be the largest rice port in
439 the world. From January to May the river is crowded
178 with shipping—huge iron and steel sailing craft that have
256 been chartered beforehand, and carry off thousands of bags in their capacious holds; and a constant succession of "ditchers," as the steamers passing through the Suez Canal are called, which come "seeking," and seldom have to go away without their full complement of "five parts cargo rice," or "Europe milled." The steamers are displacing the sailing ships, and the shorter passage now makes it possible to carry fully husked rice home without the danger of heating, which was supposed to be avoided by the partly husked "five parts cargo rice." Harbour-masters and river-pilots have a busy time, and gather together many

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563 pieces of silver against the later months of the year, when they will have abundant leisure to spend them. Coringi coolies swarm in the town, and their monotonous chant, "Eh-ya-mah-la Tah-ma-lay, Madras Ag-boat Tah-ma-lay," may be heard at any hour of the night or the morning, floating over the river. The British sailor overflows into the town and sings noisy old salt sea-songs round about the Sule pagoda, gets mad drunk on arrack, and not unseldom clears Dalhousie Street with a linked-arm rush, heedless of the red-turbaned guardian of the peace, who keeps out of the way in the meantime, but will break poor drunken Jack's head with his truncheon if he finds him helpless and strayed from his fellow-roysterers.

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563 The Puzundaung Creek, where all the mills are, is as busy as an ant-hill all day long, and all night too, when some of the mills are lighted up with Jablochkoffs or later forms of electric light, and the silvery rays shine ghastly on the black and bronzed mill-workers. Here we have the Madrasi coolies again, making noises, according to their nature, as a kind of assertion that they are doing hard work. The lank Chittagonian firemen, with their aquiline noses, are coated with coal-dust, and divide their time between firing up and having a whiff at the hubble-bubble when Sandy,

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CHAPTER XXV

A HARVEST FEAST

ONE of the pleasantest and most social of Burmese country festivals is the ceremony which goes by the name of Tamanè Hto-thi. It occurs in the month of Ta'saungmôn, or of Na'daw, when the harvest is over and the first of the new rice piled up in a heap near the farmer's house, or perhaps stowed away in the capacious bottom of the hnaw, the big rice-boat, with its stern rising ten or fifteen feet above the surface of the water, and ready to start for Rangoon whenever its owner shall have hit upon a lucky day for commencing the voyage. In order to acquire a store of merit as well towards the next existence as towards the journey immediately in view; to back up the verdict of the astrologer from the horoscope with the good wishes of the holy men of the monastery; and, above all, to have a feast such as generally comes in somewhere in all Burmese religious proceedings, the cultivator resolves to give away twenty baskets or so of rice in alms and presents to the yellow-robed monks and his neighbours. A special kind of rice is always used on these occasions. Englishmen generally are unaware probably that there are a great number of varieties of rice, and that they differ very much in their flavour. Most people imagine that all rice has the same taste (no taste, they would probably say); and distinguish in a rough material way between Patna rice, which is very small, and Rangoon rice, which is considerably larger in the grain, and finally Carolina rice, which is bigger than any of them. A Rangoon merchant would go a little farther, and say that there are two varieties—the nga-sein, which he likes best and gets most of, and the nga-kyauk, which comes in more sparingly. But beyond these—

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243 and they are not the varieties most in favour with the Burmese for their own consumption—there are at least thirty different kinds. There is the byat sabā, the "tray" rice, which is considered the best, but, like most of the other sorts, will not stand the rough treatment of the steam mill-stones, and breaks in pieces. Then there is the myi-she, which has a long awn, and the myi-tôn, which has no awn at all; the taung-pyan, "winged rice," and the nga-chywè, "buffalo grain"; and so on through a long list, ending up with "black rice," which is not by any means bad eating. But of all the kinds, kauk-hnyin, "sticky rice," is the variety always used at the harvest feast. It is mixed with thin sliced cocoa-nut, sesamum seeds, ginger, onions, and pepper, all stirred together and well boiled; and the resulting mess is called tamanè. The rice is well named. It is very emphatically sticky, and even when taken alone is not very easily digested; but when it comes in the form of tamanè, the result is usually a widespread attack of colic throughout the village. This, however, comes after the festival, when the fun is all over, and does not concern us in any way.

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574 527 [787] When the farmer has made up his mind as to the day on which he is going to have the feast—a date which, of course, cannot be settled without consulting the wise men of the village and much pondering over the palm-leaf horoscope—he sends out a few boys with a number of packets of "pickled tea" to all the young men in the place, requesting them to be good enough to eat it and to come without fail that night to his homestead in order to help him to husk his rice for the tamanè hto-thi. A few girls are also asked to come; and they bring their friends for the sake of company, and the mothers follow for the sake of propriety. Thus there is quite a large assemblage at the farmer's when night falls and the business is to commence. There is a good deal of preliminary tea-drinking and smoking of cheroots and chewing of betel and le'hpet, and a great deal of laughing and talking. The girls profess to be astonished to find so many young men there; they had not imagined their host was meditating such extensive preparations, and thought there would be nobody there but his own and his wife's younger brothers. That is exactly what they will say next week

14: Brant E-5 (1949-50) 1954 AP1 Burma
Burmese AP4

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Garden cultivation is quite simple. Hand tools, such as steel mattocks, rakes and hoes, which are obtained from Rangoon, are employed to prepare the soil. Cattle or water buffalo excrement is mixed with water to a thin consistency and poured from bamboo-spouted metal buckets over the ground. (The use of human excrement as a fertilizer, common in China and Japan, is not practiced in Burma.) During the monsoon season there is, of course, no problem of irrigation, but during the hot and dry seasons the gardens must be watered frequently. This task is often performed by young boys, who draw water from the wells and apply it to the gardens. The work of picking the matured crops and preparing them for transport to market is commonly done by female members of the household.

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2. Paddy Cultivation. The principal occupation of forty-three persons is cultivation of paddy. This category is here defined to include individuals who own or rent land on which they cultivate paddy, as distinct from persons who work on a wage basis in the paddy cultivation of others. The latter are referred to in this report as field laborers.

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Of the thirty-four paddy land holdings on which we have data, twenty-nine are rented and five are owned by the cultivators. All but one of these holdings is under twenty acres. This high ratio of renters to owners, as well as the small number of paddy cultivators relative to the total number of gainfully occupied villagers, is reflective of long-run trends in agriculture in this general area. Rural tenancy has been the outcome, in Lower Burma, of a long period of loss of land ownership to moneylenders, largely absentee, through inability of the cultivators to repay loans taken out at very high rates of interest. As tenancy has grown apace, individual cultivators have become discouraged with their small return for hard work. Accordingly, many have given up paddy cultivation altogether in favor of less arduous and relatively more rewarding occupations. However, this trend may be reversed, for there began in early 1951 actual implementation of the Land Nationalization Act of 1948, which provides for distribution of agricultural land to the cultivators on an individual ownership basis.

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For the great majority of the paddy cultivators of Tadagale it is possible to eke out little more than subsistence from season to season. A few, after paying their hired labor, putting aside seed for the next year's planting, and filling the granary for home use, can realize some cash income by the sale of a small surplus of paddy. If the cultivator with a little surplus can possibly afford it, he holds the paddy until the hot season, when the market price is highest.

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The average yield per acre in Tadagale, based on data for thirty cultivators for the harvest season 1948-49, is 19.8 bushels of paddy. This compares closely with the overall average figures for Burma. According to the Yearbook of Food and Agriculture for 1949 (U.N.-F.A.O.) the average yield per acre in Burma was 20 bushels.

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In late March, the paddy fields of Tadagale are burned over, depositing an ash from any stubble remaining from the previous harvest. Sometime after the New Year celebration (which begins about April 13th and continues several days) the cultivators spread manure over their fields in preparation for the coming planting season. The manure is obtained from the Indian dairy farmers of the village in exchange for paddy stalk.

14: Brant E-5 (1949-50) 1954 AP1 Burma
Burmese AP4

When the monsoon rains become heavy and steady in late June or early July the fields are plowed with a succession of bullock-drawn implements. The first is a single-toothed harrow, followed by a six-toothed plow. Finally, the soil is gone over with a seven-bladed revolving share. If the ground is not yet sufficiently churned up, a harrow with a large number of teeth may be used. 243

A few days before the planting time the paddy seed is soaked and placed in a wooden cask, the top of which is packed with hay and cow dung. This promotes germination of the seed.

The seed is broadcast sown.* The sower begins at the outermost edge of the field and works his way towards the center, walking in increasingly smaller circles. Beginning at six o'clock in the morning and working until four o'clock in the afternoon, with an interval at mid-morning for his meal and again in the early afternoon for a nap, a sower can cover ten acres in a day. It requires one basket of seed (ca. 48 lbs.) to sow one acre. It is said by villagers that when one is experienced at broadcasting of paddy seeds, regular rows of plants result. 243 512

During the period of about seven days required for the sown seeds to sprout, the cultivators weed the fields, block off water channels, and build up the embankments between fields. About forty days after sowing, when the plants have reached a height of several inches, some necessary thinning is done. Two inches is regarded as the optimum space between plants. Where they are growing closer together some are pulled up and re-planted in thinner areas. 243

Once sowing and thinning has been completed, in mid- to late August, there is little work for the cultivators until harvest time in December, except for frequent visits to the fields to make sure that the water is sufficient and evenly distributed.

At the harvest season, the cultivator and his hired field laborers work in teams of two. One team cuts the paddy about eighteen inches from the top with small hand sickles. These tools are made of good steel blades, obtained in the Rangoon bazaars, which are affixed to handles of buffalo horn. The paddy cutters are followed by another team, which cuts the paddy stalk close to the ground. In the case of hired field laborers doing this work, the prevailing wage is 12 to 16 rupees (ca. $2.50 to $3.50) per acre for paddy cutters, and twenty rupees (ca. $4.00) per acre for stalk cutters. The higher wage for the latter type of work is paid because it is considered harder. Sometimes such field laborers are remunerated in paddy rather than in monetary wages. 243 465 436

The cut paddy is gathered into small piles, about an armful around, which are left in the fields a few days to dry. Then they are bound as sheaves and transported in bullock carts to a cleared area nearer the domestic area, which serves as a threshing floor. 243

Threshing is accomplished by leading bullocks, yoked together and muzzled to prevent their eating the grain, over the paddy sheaves. The bullocks are

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* This method is not common in Burma. One cultivator, when queried concerning the reason for this method, stated: "The land here is not fertile, and though the transplantation method would give a higher yield, the added labor cost would not justify it." [248]

243 led around in circular fashion until the grain is thoroughly separated from the stalks. A pronged hoe is then drawn over the stalks to further the separation, after which the bullocks further stamp upon them. When the grain appears to be full separated from the stalks it is swept up into large heaps, while the stalks are put aside for use as cattle fodder.

Winnowing apparatus consists of a tripod of bamboo poles, from the top of which is suspended a plaited round tray of wide weave. Basketsful of grain are handed up to a man who stands on a platform, often an old barrel or a chair, and empties them on to the tray. As he shakes the tray the grain falls through to the ground, while any chaff is carried away by the wind.

The paddy for household use may then be allowed to dry further before being sent by boat down Pazundaung Creek to be milled. In a few households the paddy for home consumption is husked by a foot-operated pounding device, or by a large, hand-operated mortar and pestle. If there is any surplus, beyond the requirements of home consumption, seed, payment of laborers and debts, it is sold to nearby millers who come to purchase it.

494 3. Bus Operation. Forty-four men of the community are principally occupied as bus drivers or fare-collectors. The latter are known as 'spares' in the local terminology. Because of the total destruction of public transportation facilities during World War II in Rangoon and the surrounding area, large numbers of surplus military vehicles have been converted into buses. These buses are owned individually or by small groups of partners. The Tadagale men who engage in bus operation ply between the village, which is a terminus, and Rangoon. Their vehicles are, for the most part, in poor repair, and breakdowns along the route are not uncommon. No regular time schedule is followed; rather, they begin a trip when fully loaded, which is to say extremely tightly packed with passengers. By carrying maximum loads, and by charging a fare of 6 annas (ca. 8 cents), the bus operators are able to make a profit, despite the high cost of fuel (ca. 47 cents per Imperial gallon) and of repairs.

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464 4. Field Labor. Thirty-eight villagers make their livings mainly by field labor. During the planting and harvesting seasons they work steadily for cultivators, either in Tadagale or in nearby communities. They are paid in kind or in cash, seldom in combination. During the growing season, August to November, and again, between the end of the harvest and the beginning of the planting season, these people must depend on other temporary jobs to round out their livings.

234 5. Dairy Farming. This occupation is carried on exclusively by the small
563 group of Indians in Tadagale, who possess herds of water buffalo and cattle.
443 Fresh milk is taken daily by bus, in large metal containers, to Rangoon, where it is sold for cash, mostly to Muslim restaurants. The Burmese inhabitants of Tadagale make but slight use of milk and there is virtually no market for it in the village.

265 6. Selling of Prepared Foods. The preparation and itinerant selling of certain Burmese foods supports twenty persons, of whom many are women. Because of the Burmese habit of informal, occasional eating between the two regular daily meals, food sellers do a considerable business. They are invariably present at the pwes, outdoor dramatic presentations staged during holidays and on other festive occasions.

matters, and cases occurred in which he unwittingly signed away title to his property, thinking he was only signing 'loan papers.' In some cases, Burmese cultivators, encouraged by moneylenders, borrowed sums greater than actually required for crop financing and used the excess for sponsorship of ceremonial activities, dramatic presentations, purchasing imported goods never before needed, and so on. 426

The result of this was the tremendous growth of rural indebtedness and much foreclosure by creditors holding mortgages on the land. By the 1930's, about half the cultivated land of Lower Burma was owned by landlords, largely absentee. The once independent Burmese land holder was converted into a rural tenant, or, in many instances, a landless agricultural laborer. Many tenant farmers, dependent upon rent-racking landlords, worked from harvest to harvest with little to show for their efforts beyond perhaps enough of the crop, after payment of rent, hired help, and debts, to feed their families through the planting and growing seasons. Large numbers left agriculture for other pursuits, such as petty clerical jobs in the towns and itinerant trading in imported goods. In Tadagale, for example, in 1949-50 it was possible to record cases of cultivators in such difficult straits that after paying their help and taxes, they did not have enough paddy left for the family granary to last until the next harvest, and were thus in the position of having to purchase in the market, at inflated prices, the very commodity they produced. 178 426 463

2. The Shift in Tadagale. The economic shift within the village may be summarized in terms of modes of employment, resources, imports and exports. 178

a. Employment. Rice agriculture has been decreasing as the land has passed, over time, into the hands of absentee landlords and independent owner-cultivators have become fewer. The tenant farmers are likewise small in numbers. [243] [422]

The manufacture of clothing has also diminished. Formerly, cotton was spun and woven in the village. Now, clothing is very largely obtained by purchase of imported piece goods in Rangoon and having it finished by city tailors and seamstresses. [244]

Oil pressing as an occupation has disappeared. The one remaining presser of oil seeds recently abandoned this work because of the difficulty and high cost of obtaining sesamum seeds from central Burma. [249]

In a few occupations there seems to have been no notable change. These are carpentry and work in bamboo and thatch, which keep a few people occupied; itinerant selling of prepared foods; shopkeeping; and medical practice (indigenous medicine). 178 463

Several occupations are new or increasing in the village. Agricultural wage labor has increased as more people have been unable to secure a living as tenant farmers and have gone to work for others in and near the village. Vegetable gardening, always important because of the nearby Rangoon markets, has become a leading occupation, especially since the beginning of the insurrections in 1948 which reduced the supply of fresh vegetables from the north.

As motor transport has replaced animal transport over the years, the men of Tadagale have been increasingly employed in operating buses. Related to this is the establishment of a repair shop by a motor mechanic to service the buses owned by villagers.

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basket PYIDAUNG. Both cost a rupee. One does not seem to be preferred to the other except as getting them allows a bargain to be made. The form is that of a pear shaped body with a square base, measuring about 8 by 8 inches. The basket is constructed in the wicker technique with small, whole reeds. Pathwe: 2. Camp: 1.

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CHIN DAUNG (storage basket): The form of this basket is a larger version of the measurers. It has, however, an open weave giving a checkered effect to the sides and bottom. It is used to store objects including food. At Pathwe this basket was used in working the INE. The fish were scooped up, and later washed in them. The two used in camp were brought from Pathwe where they cost Rs. 1/4- Camp: 1, Pathwe: 15 for washing fish.

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Winnowing trays: Shallow baskets about 2½ feet in diameter and 2 inches high were used as shifting and storage trays. The SAGAN has a rounded base; whole the SAGAR has a flat base with fiber walls. Both are made of flat, wide-meshed reeds. The trays used in camp came from Pathwe where they cost Rs. 1/4 each. Pathwe: 1.

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ZEE CHIN (Marketing basket): This basket is in the general shape of a cylinder, ½ feet wide and 8 inches high, with open, flat reed sides and a semi-circular handle across the top. It is used to carry objects from market and to store them in the house. Pathwe: 2, Camp: 1.

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U Nyaing expresses the contrast between the camp equipment and that of Pathwe: "These objects in camp are barely sufficient. We have to live as we are. In our own district we had sufficient to spoil in boxes. The extra ones were nailed in boxes and only enough were taken out for the seven people who eat. When visitors come, good ones are brought out. Plates for curry, plates for eating rice. There were various kinds."

Food Items

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Ma Aye Nyaing gave as complete a set of data on the food consumption of her family as she could. The following data is inclusive for the family of seven, both in Pantanaw and the refugee camp. Ma Aye Nyaing decides what dishes to cook for each meal of the day, and she does this without any consultation with U Nyaing. She does not ask [593] him what he would like for each meal, although sometimes when he expresses a desire for a certain dish she sees to it that it is prepared. She has a free hand in deciding what to cook for each meal in the day. Definitions of the weights and measures used follows in a glossary. The data is organized under the headings of (1) Main dishes and raw foods, (2) supplementary dishes and TO-ZATA (vegetables eaten with NGAPI), and (3) trifles. [128]

to 2½. Mangoes in season cost four annas for ten. In camp they have eaten mangoes twice in six months, six for one eating, Re. 1/- for six. 263 435

MAYAN-THEE-AMBE (marian-fruit-ripe: Bouea burmanica, Griff.) are eaten in the afternoons, with salt. Similarly with unripe ones. They are also eaten with rice and NGAPI YE. In Pathwe about ten fruits were eaten almost daily when in season. 178

NGA PYAN-THEE (banana-fruit: Musa paradisica, Linn, Sub-sp, sapientum, K. Schum). Bananas are sometimes eaten with rice during the main meals but usually by themselves. In Pathwe one bunch a day containing 13 bananas and costing three annas were eaten during four or five times a month. In camp the same bunch costs four annas and bananas are eaten five times a month.

THAGYAR-LON (sugar-ball) or sweets, and CHO-CHIN (sweet-sour) are bought. Ma Aye Myaing has never seen these being made and hence does not know the process of manufacture. The THAGYAR-LON are round sweets also but are shaped like small orange pods and weighing about six to the tical. They are eaten only in camp. The consumption of sweets is limited to the youngest. She gets 8 THAGYAR-LONS a month at one anna for two and two for an eating; and 18 CHO-CHIN a month at an anna for six and six for one eating.

Ma Aye Myaing gave the following data on the period of the year when the foods used by the family are available. 262

Fish is obtained from the fishery in Pathwe from the month of Tawthalin to the month of Pyatho. From the other places in the river, fish was obtained from Tabodwe month to the months of Kason and Nayon. The varieties of fish remain the same in both fishing areas. Shrimps are plentiful in Pyatho month and lobsters in Tasaungmon and Nadaw.

KALA-BE (dhall): In common with a great number of peas and beans, KALA BE appears about the month of Tabaung. However, since these are not very perishable, they can be kept in stock for the whole year and made available in any month.

KAYAN-THEE (bringal): The bringal plant starts to bear fruit in the month of Pyatho and continues to Kason and Nayon. In Tawthalin and Thadingyut, bringal fruit was brought to Pathwe from other villages from the fields not on the river banks. Here in Rangoon they notice that bringal fruit is available all year round.

PE-LINBWE-THEE (snake beans) were available during the months of Kason, Nayon, Waso, Wagaung, Tawthalin and Thadingyut.

In Rangoon many of the plants and vegetables that were cultivated only seasonally back in Pathwe and the other district villages, are cultivated all the year round. The ready market in Rangoon encourages the districts lying just outside Rangoon to produce whatever plants they can and send them to town. [369] [241]

PE THEE (beans): These appeared in Pathwe for 9 months in the year. The first period is from Tasaungmon to Tagu, and the second from Waso to Thadingyut inclusive. In Rangoon this is available all year round.

HSAN (rice): During the months of Kason and Nayon the paddy grains are sown in the nurseries, and the seedlings are then transplanted to the fields during Waso and Wagaung. In other fields where no transplanting is carried on, the seeds are sown broadcast in Kason and Nayon. There are some species of paddy grain that ripen earlier than the rest. However, from the point of view of the consumer, rice is available all the year round. [243]

MYAUNG-THEE (chillies): The seeds are planted during Waso, Wagaung and Tawthalin and transplanted during Tasaungmon. The chillies

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

102. PLOUGHING FOR WET CULTIVATION.

CHAPTER IV

MANHOOD AND OCCUPATION

103. VIEW OF IN.

THE cultivation of the lowlands provides the occupation and livelihood of one out of every two Burmans. There is little undulating land or steppe. The hills as a rule rise abruptly from the alluvial plains. On these latter the bulk of the population is settled. For the wet form of rice-cultivation, which alone gives regular crops and is therefore called *permanent* cultivation, as opposed to *taungya* (p. 147), the land must be lightly flooded for a good part of the season; the crop must not be submerged after the ear has formed nor for any lengthened period beforehand. The land must not be so porous as to let the rain-water drain away when the subsoil water sinks. The patch of fields favoured by the floods of one season may be drowned or be left dry the following year owing to the vagaries of the rivers.

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

104. OUTLOOK OVER MIXED FORMS OF CULTIVATION.

the vagaries of the rivers. A good season is one in which a large proportion of the fields have water enough for an early start and in which the rainfall is steady, not leaving the surface to dry up by a long break in the rain nor deluging the soil at other times. All the alluvial land of favourable elevation and quality is laid out in level rice-fields. Where the rainfall is ample—fifty inches and upwards—portions of the diluvial land with tenacious soil can be utilised in the same way by merely saving the surface-water. In regions of lighter rainfall, in a few favoured localities, such land is brought under rice by help of irrigation and if need be by terracing as well. The rice-fields are bordered by low turfy balks (*kazin*) about a cubit high, to keep in the water. These regular rice-lands form less than one-tenth of the gross area of the country. The rest is mainly irreclaimable, chiefly mountain, waste. The waste areas of the alluvial plains (*kwin*) are flooded from three to ten feet deep in the rains. They are clothed with elephant-grass (*kaing*) studded, through with silk-cotton trees and a few other species. The lowest levels in the *kwin* form shallow lagoons (*in*, No. 103) which dry up in the hot season. Dry-season crops—sugar-cane (which is also grown on the wet system), maize, lentils, and vegetables for a limited market—are obtained in the *kaing*.

105. HILL-PEOPLE MAKING THEIR CULTIVATION CLEARING (p. 149).

Burma has become the rice-mart of the world. Since the development of this trade the price of the staple export has more than quadrupled, producing in the lower country a prosperity which has no parallel in respect of its equal diffusion. It is believed that this development of the wealth of Pegu has been favoured by the upheaval

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

133 of the delta of the Irawadi, by which fresh silt-beds are raised to the cultivation
134 level. The town of Thâton, now sixteen miles from the coast and without a sea approach, was, in historic times, a port. Ships came up to Tenaserim in the south, the ancient emporium of trade across the Peninsula to Siam, and to Akauttaung in the north, and probably to Pegu. A mass of precise data on this subject was collected by the late Mr. John Merrifield, who came to the conclusion that Tenaserim had risen fifteen to twenty feet in the course of the last 300 years. In 1900, ten and a half million acres were cultivated in Burma. The rice crop was estimated at three and a half million tons, of which two millions were exported, worth £14,000,000. Fallow lands were estimated at five and a half million acres and arable waste at twenty-four millions, out of a gross area of one hundred and one millions. In 1872 a considerable firm failed over the enterprise of bringing a few thousand acres of reputed arable waste at Kayásu under cultivation; the crops got so much water that they rotted. The area has lain waste ever since. Most of the waste land granted to companies has been resumed, on account of their failure to satisfy the condition of utilising the land. The conditions which render land suitable for wet cultivation are less simple than they appear at the first glance. It is possible that the estimate of the arable waste is much too high.

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[175] 106. THE RICE PLANT IN THE EAR.

Where the fields depend on the surface-water for their supply, a margin of fallow has to be left; where they get a deposit of river-silt it is unnecessary. If manure is plentiful it is taken out on the fields. But this is seldom the case because the cattle are so much at large. On the outskirts of the rice-fields, which are dispersed in groups throughout the *kwin*, fallow land may readily relapse into waste. The depopulation of Pegu (Chronology, 1570, 1591–1740) threw great areas out of cultivation. Anyone was free to reclaim waste, and is so still. In Burma Proper, where good land is much scarcer than

[423] in Pegu, proprietors are fixed on the soil in many places by royal grants (*bo-myè, bôbabaing*). There were also royal demesne lands leased to tenants.

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In the dry zone of Burma Proper, rice cultivation is impracticable except where rivers flood their margins or where facilities for irrigation exist. Rice

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

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110. BUFFALOES TRAMPLING DOWN THE CLODS.

are worth twenty to sixty rupees a head, buffaloes twenty-five to fifty. The latter are heavier and more powerful, and better able to work in the wet and to forage for themselves, but they are subject to many distempers, of which the worst is anthrax. The noses of the draught-cattle are pierced and a thin rope rove through which is spliced at the back of the horns. During a great part of the year there is no work for the buffaloes, as they are of little service for wheel-draught; then they are left to roam at large. They frequent the streams and lagoons, where they are followed by egrets and crows, which pick the worms out of the mud as the buffaloes turn over in their wallow. While crops are standing, cattle have to be kept in pens at night, and to be herded by day. This work is done by children from twelve years upwards. The buffalo-pen is made near the house, if possible in a water-logged spot where the animals can wallow in the mud, which protects them from the bites of gad-flies and mosquitoes. Where there is no wallow, smoky fires are made to keep the insects away. In certain localities of the delta cattle need to be protected with curtains. In the arid region fodder is grown for the cattle, but goats find pasture and are kept for their milk; they are worth five to twenty rupees a head.

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The rice-fields first ploughed and ready are sown broad-cast for nurseries (*pyo-gin*). A month later, when the rice-plants are about a foot high, they are taken up and transplanted into the prepared fields, a span apart. The roots are simply pressed down into the soft slush

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111. DRIVING HOME THE BUFFALOES.

25; Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

[opp. p. 52]

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112. PUTTING OUT THE RICE-PLANTS.

25: Ferrars E-5 (ca. 1890)1901 AP1 Burma
Burmese AP4

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[231]

113. BUFFALOES IN THEIR PEN.

with the fingers or with a forked stick. The acre produces thirty to eighty bushels of grain, according to soil and season. The ripe corn stands three to five feet high, and so thick as to keep down tares. Unlike hill-rice (p. 149, No. 244), which requires several heavy weedings in the season, the wet rice-fields need no care beyond that of regulating the water-supply. Where there is drainage for the water, it is allowed to stand only a few inches high on the ground. As the grain ripens, the soil is allowed to dry. If there is a head of water available during the rains, channels are led to the fields to keep the supply equal. If the supply is near and only at a slightly lower level than the fields, the effects of drought are counteracted by various devices such as the *ka-hnwè* (No. 115). Running water at too low a level to lay on to the fields is utilized by help of a bamboo water-wheel (*yit*), or if the water be still, the wheel is driven by ox-gear. In some parts, rice and wheat are sown in the deeply-flooded lands when the water has drained off (*maylu*).

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The varieties of rice, of which there are many, suited to different soils and modes of cultivation, take from three to five months to mature. The harvest of the crops is from October to December, according to the variety and time of planting out. When the grain turns yellow, flights of parakeets and other birds descend on the crops, from which they have to be scared till reaping-time. Bamboo clappers are worked by bast lines in a radius of a hundred yards from the watcher's hut. Where there is an abundance of pasture for cattle, the stubble is left very long and is burned where it stands, to manure the ground. But if straw is needed

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114. CHILD RIDING BUFFALO OUT TO WORK.

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

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118. WATER SCOOP (KA-HNWE).

for fodder, the corn is cut close to the ground, having first been laid by pressing it down with bamboos, which makes it easier. For reaping, the villagers co-operate. But in the plains of the delta, where cultivation has extended so greatly, there is not labour enough on the spot to reap the crop. Harvest labourers come down from Burma Proper and also large numbers from the south of India (p. 159). In the plains reapers get their two meals and a quarter of a bushel of grain a day or the equivalent in money (p. 56). In the hills a reaper gets a bushel a day for his labour. The common wages of daily labour are about half a rupee in Pegu, and a quarter less in Burma Proper. Before 1850, when the export trade began, wages were only half as much.

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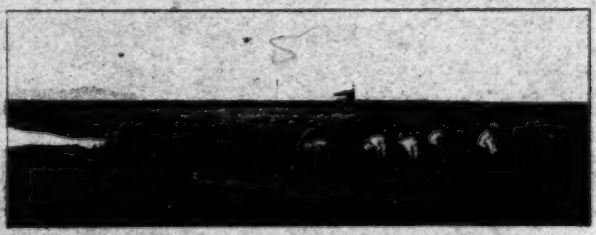
The sheaves are left to dry for a day in the sun and then gathered into garbs. These are piled on a dry field into a circular heap some three feet high, and broad enough for a herd of buffaloes to tramp round upon and tread the grain off the ear, to which it is attached by a slender petiole. Another way is to pile the garbs in a high crescent-shaped heap, round the central space of which four to six head of cattle are made to travel abreast and tread the garbs which are cast down from above. The grain keeps best in the husk and is stored in bins of bamboo wattle smeared with clay (*sabaji*, Nos. 119, 120).

The covering of the rice-grain is a strong adherent husk like that of barley, but mostly without any beard. Rice in the husk is called *Sabi* (Engl. paddy).



119. CUTTING THE CROP IN THE GREAT PLAIN.

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

[opp. p. 54]

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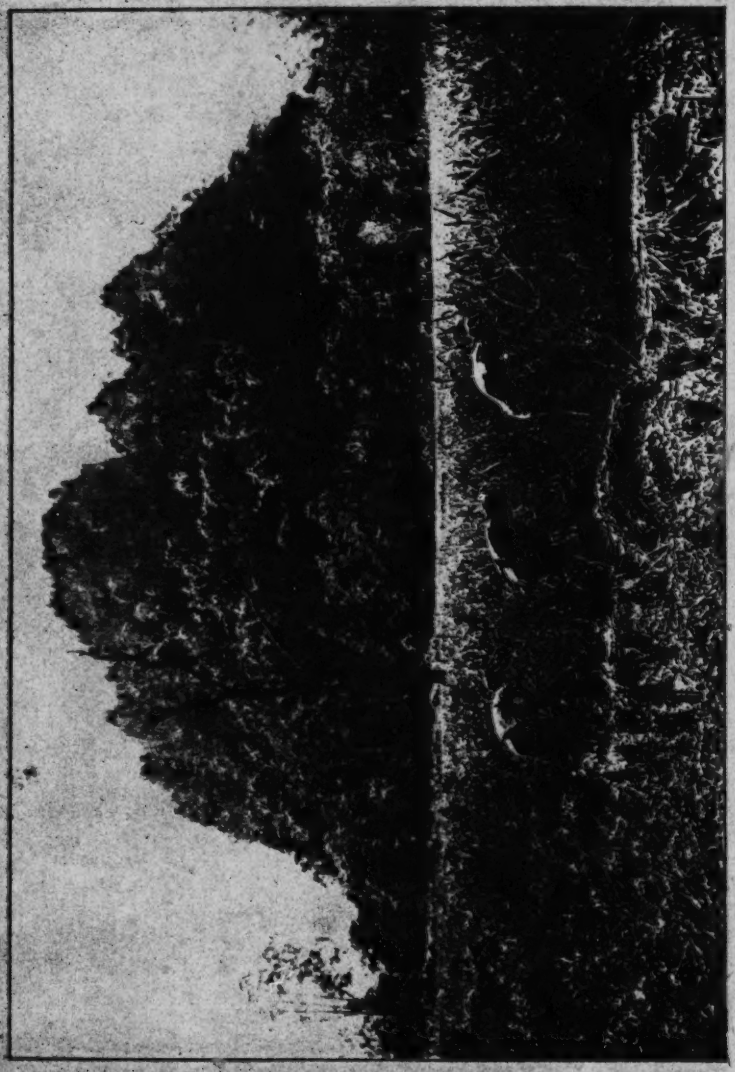

117. CUTTING THE RICE-CROP IN THE KWIN.

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

243 Under the coarse yellow husk is a shell of bran, and beneath that a delicate white pellicle. The two outer coverings have to be removed and the inner one preserved. "Cargo rice," which forms the bulk of the mill produce, is three parts rice, simply husked, and one part paddy. The mixture bears the transport.

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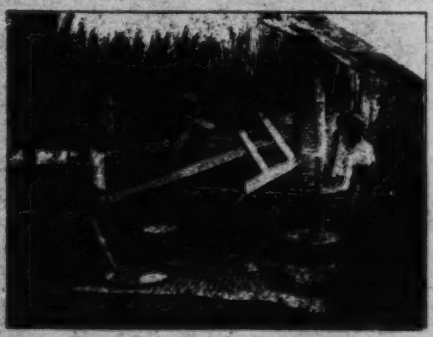
118. TREADING OUT THE GRAIN.

better than white rice. Burmans clean the rice according to daily need. This is done either by simple pounding or by first husking the grain in a wooden mill (*kyaizsin*), and then pounding it to get off the bran. The mortar is of hard wood, with a hard wood pounder as heavy as the arm can wield; or else the pounder is mounted in a tilting-beam for foot-power. Chaff and bran are separately winnowed out with sieves and trays (*sagáw*) of bamboo, and in exposed places by the help of the wind also. For wholesale husking, the native mill is composed of two strong wicker-work cylinders made solid with clay, in which are embedded upright staves of hard wood (Nos. 127, 184). As the mill wears down, the layers of wood keep above the clay like the layers of enamel in a herbivore's tooth, maintaining a rough surface for work. In the early days of the export trade, rice was husked for shipping in this way. The separation of the chaff is done with a machine copied from our farmyard winnower, and now manufactured in every town.



119. CLEANING RICE WITH THE HAND-POUNDER.

25; Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

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250. CLEANING RICE WITH THE HAND-MILL.

in every town. A basket (*din*, bushel) of cleaned rice (*san*) costs three to four rupees, and lasts a man about a month. The loss of volume in cleaning is about twenty-five per cent., and the cost of the unhusked grain about one-third of that of rice. For cakes and sweets, rice is ground with water in the Indian stone hand-mill. After first soaking, it is passed through the mill repeatedly until it forms a creamy fluid, which is strained and used while fresh. Wheaten bread is a novelty.

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The houses in Burma are mostly built of bamboo. The giant bamboo (*wabó*), a denizen of the evergreen hills, is cultivated in the plains for house-posts and masts and side-buoys of boats. Its culms attain a height of eighty feet and a girth at the butt of two feet. Every bamboo jungle supplies the rest of the material for the house. No tools are needed for bamboo work, but the universal *dá*—a sabre, trimmer, chopper, according to its proportions (No. 251). With the *dá* the bamboos are hewn, split open and slit into withes (*lint*) for lashing. Thin-walled bamboos are opened out into broad planks for the walls of the houses (*tarán*). Stout thick-walled bamboos are shaped into narrow planks for flooring, or the floor is laid of round bamboos laced down at intervals. Loose planks of wood are becoming general for floors, even in houses built of bamboo (p. 119). Every Burman can handle the *dá*, but not so expertly as the hill people. The house-posts, floor-girders, and principal frames are frequently of timber, and outlast several relays of the bamboo-work, which decays in a few seasons. The inducement to keep a material clean and neat which has soon to be replaced is not great, and engenders negligent habits. In the better houses, bamboo is only used for the walling and the roof rafters.

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251. WINNOWING GRAIN IN THE WIND.